WeatherNet

<u>User Manual</u>

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Introduction

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Purpose of the User Manual

Welcome to the WeatherNet User Manual! This guide is designed to help you navigate and make the most of the WeatherNet website, a machine-learning-based weather forecasting platform. Whether you are a first-time user or an advanced explorer of weather prediction, this manual will provide step-by-step instructions and insights into the website's features, ensuring a smooth and productive experience.

Overview of WeatherNet Website

The WeatherNet website is an innovative platform designed to deliver accurate, real-time temperature forecasts for Israel using advanced machine learning techniques. With a focus on mid-term temperature predictions, WeatherNet provides users with tools to explore:

- **Real-Time Temperature Forecasts**: View predictions for some regions of Israel, updated regularly.
- **Forecast Comparison Tools**: Compare WeatherNet's machine-learning-based temperature predictions with those of the Israel Meteorological Service (IMS).
- **Interactive Insights**: Access detailed statistics about forecast accuracy and learn about the architecture behind WeatherNet.

Key Features

WeatherNet simplifies weather forecasting with a user-friendly platform. Key features include:

1. Real-Time Forecasts

Accurate, regularly updated temperature predictions for northern, central, and southern Israel are accessible under the Forecasts menu.

2. Forecast Comparison

Compare WeatherNet's predictions with Israel Meteorological Service (IMS) forecasts side-by-side in the **Forecasts > IMS's** section.

3. Statistical Insights

Explore forecast accuracy through interactive charts in the Statistics section.

4. Transparent Architecture

Learn about WeatherNet's machine learning techniques in the **Model > Architecture** section.

5. Papers and Manuals

Access detailed documentation, including Phase A and B papers, in the Papers and Manuals section.

6. Easy Navigation

A clean interface and intuitive sidebar menu ensure smooth navigation across all features.

These features make WeatherNet a trusted tool for mid-term weather forecasting.

Getting Started

Accessing the WeatherNet Website

URL and Navigation

To begin using WeatherNet, open your preferred web browser and enter the official WeatherNet URL (https://weathernet-il.web.app/) into the address bar. Once the homepage loads, you'll find an intuitive and user-friendly interface designed for seamless navigation. The sidebar menu on the left provides access to all key features, including forecasts, statistical insights, and documentation.

Layout Overview

Header and Navigation Bar

The header at the top of the page offers quick access to important functions:

- **Theme Toggle**: Switch between light and dark themes for a personalized display.
- **GitHub Link**: Access the WeatherNet project repository directly from the header.
- **Share Options**: Quickly share WeatherNet via popular platforms like Facebook, LinkedIn, and WhatsApp using the share button.

Customizing Display Preferences (theme- light/dark)

Users can customize the display to match their preferences. Use the **Theme Toggle** button located in the top-right corner to switch between light and dark modes. This feature ensures a comfortable viewing experience in various lighting conditions.

Sharing Options

Main Dashboard (Navigation Bar)

The sidebar navigation bar on the left organizes WeatherNet's features into clear sections:

- **Home**: Return to the homepage.
- **Weather**: Access real-time forecasts and IMS comparisons.
- **Model**: Learn about WeatherNet's architecture and methodologies.

- **Papers and Manuals**: View documentation like the Phase A and B papers and user manuals.

- **Who Are We?**: Discover the contributors and contact the team.

This well-structured navigation ensures that all key features are just a click away, enabling a smooth and efficient user experience.

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Main Features and Pages

Real-Time Weather Forecasts

WeatheNet's

WeatherNet provides accurate, real-time temperature forecasts tailored for northern, central, and southern Israel. Access these forecasts from the sidebar by selecting **Weather > WeatherNet's**. The forecast data is updated regularly to ensure precision and reliability. The interface displays predictions clearly with an intuitive breakdown for each region.

IMS's

For comparison, users can view forecasts provided by the Israel Meteorological Service (IMS). Navigate to **Weather > IMS's** from the sidebar to access these predictions. This feature allows users to compare different forecasting models side by side for better insights.

Forecast Comparison Tools (Statistics Page)

WeatherNet's **Statistics** page enables users to compare its machine-learning predictions with IMS's forecasts. The page provides:

● **Interactive Charts**: View trends and accuracy metrics over time.
● **Performance Comparisons**: Analyze differences between models with statistical insights. This tool offers a comprehensive understanding of forecast reliability and helps users make informed decisions.

About

About WeatherNet

The **About WeatherNet** section introduces the platform, its goals, and its focus on mid-term weather forecasting for Israel. It explains the platform's integration with IMS data and its commitment to providing high-accuracy predictions for diverse regions.

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About Our Architecture

Learn about WeatherNet's innovative hybrid machine learning architecture under the **About WeatherNet > Architectur**e section. This section illustrates how the platform leverages Convolutional Neural Networks (CNNs) and Transformers Encoding models to deliver precise forecasts. Visual diagrams and descriptions provide a clear explanation of the forecasting process.

Contact

Contact Us page

The **Contact Us** page provides information about the contributors and the development team behind WeatherNet. Users can view contributor profiles and their contact details for further inquiries or feedback.

Send Us Message

WeatherNet's **Send Us a Message** feature allows users to submit questions, feedback, or concerns directly through the website. To use this feature:

1. Navigate to **Contact Us** from the sidebar.
2. Fill in your email address, subject, and message in the provided form.
3. Click **Send** to submit your message. The team will respond as promptly as possible to address user inquiries.

Closing Statement

Thank you for using the WeatherNet User Manual. We hope this guide has provided you with the clarity and confidence to explore all the powerful features and tools that WeatherNet has to offer. By leveraging cutting-edge technology and user-focused design, WeatherNet aims to make weather forecasting accurate, accessible, and engaging. Should you have any further questions or require assistance, please don't hesitate to reach out through the Contact Us page. We're here to support your journey into weather forecasting!